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DIALOG(R)File 351:Derwent WPI

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**Mask defect checking device for electron beam exposure, compares mask signal and CAD signal which are generated according to mask shape, to check defects of mask**

Patent Assignee: SEIKO INSTR INC (DASE ); MATSUOKA R (MATS-I)

Inventor: MATSUOKA R

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
✓US 20020024019	A1	20020228	US 2001933785	A	20010820	200237 B
JP 2002071331	A	20020308	JP 2000254970	A	20000825	200237
✓DE 10141422	A1	20020508	DE 1041422	A	20010823	200238
KR 2002016541	A	20020304	KR 200150912	A	20010823	200258

Priority Applications (No Type Date): JP 2000254970 A 20000825

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020024019	A1		8	G21G-005/00	
JP 2002071331	A		6	G01B-015/00	
DE 10141422	A1			G01M-011/02	
KR 2002016541	A			H01L-021/66	

Abstract (Basic): US 20020024019 A1

NOVELTY - A sensitivity regulator (5) outputs a mask signal according to a mask shape, based on electrons passing through the mask. A CAD signal generator (8) outputs a CAD signal showing a required mask shape in synchronism with the output of mask signal based on CAD data (DT) for making the mask. A signal comparator (6) compares the mask and CAD signals, and accordingly checks the defects of mask.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for mask defect checking method.

USE - For checking defects of a mask used in electron beam exposure, in patterning process of semiconductors.

ADVANTAGE - Increases speed of defect checking of the electron beam exposure mask. Eliminates the need to acquire an optical image of an electron beam exposure mask and checks promptly and accurately whether or not there are defects in an electron beam exposure mask, using an electric signal and a CAD signal based on transmission electrons acquired using electron beam scanning.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic diagram of mask defect checking device.

Sensitivity regulator (5)

Signal comparator (6)

CAD signal generator (8)

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Title Terms: MASK; DEFECT; CHECK; DEVICE; ELECTRON; BEAM; EXPOSE; COMPARE; MASK; SIGNAL; CAD; SIGNAL; GENERATE; ACCORD; MASK; SHAPE; CHECK; DEFECT; MASK

Derwent Class: P34; S02; S03; U11

International Patent Class (Main): G01B-015/00; G01M-011/02; G21G-005/00; H01L-021/66

International Patent Class (Additional): A61N-005/00; G01B-015/04; G01M-019/00; G01N-023/04; G03F-001/08; G03F-007/20; H01J-037/00; H01L-021/027

File Segment: EPI; EngPI

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